WATER SUPPLY OUTLOOK

KOOTENAI RIVER BASIN

MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook for the next five months remains near average. May 1 snow surveys are generally a little above average in the Northern headwaters in British Columbia and decrease percentagewise to the south. Over all, the snow pack on the Kootenai drainage is presently about 90 percent of average and about 10 percent less than a year ago.

Streamflow in the Kootenai was 102 percent of average during April. Runoff for the next five months is expected to be near the 1948-62 average in the Kootenai River with tributary streams in the Montana portion of the drainage flowing a little below the average.

Report prepared by
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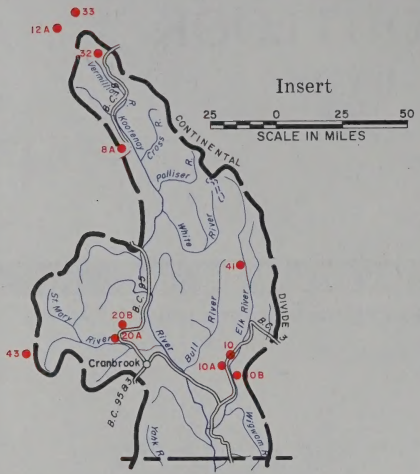
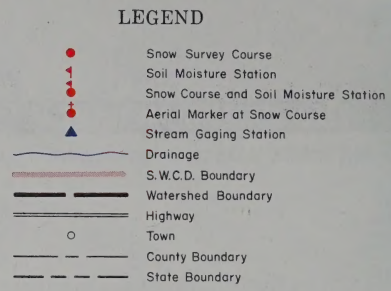
KOOTENAI RIVER BASIN





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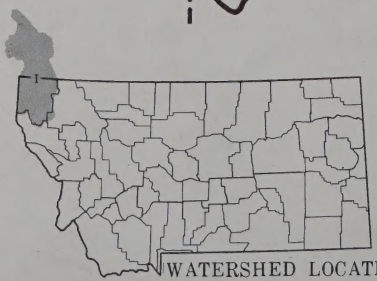

SNOW SURVEY DATA

WATERSHED I

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
15B11	Baree Creek	5500	5/2	77	39.4	46.2	49.1
15B16	Baree Midway	4600	5/2	52	24.8	-	-
15B15	Baree Trail	3800	5/2	0	0.0	0.0	-
14A04	Brush Creek	5000	4/27	19	7.2	10.2	10.7*
BC 10	Fernie	3500	4/29	1	0.3	3.2	2.8
BC 12A	Field	4200	4/28	0	0.0	0.0	0.6*
BC 11	Glacier	4100	4/27	72	31.6	22.6	25.9
14A11	Graves Creek	4300	4/28	31	12.8	16.9	-
BC 43	Gray Creek	5100	4/30	56	21.7	21.9	20.2
BC 33	Kicking Horse	5400	4/29	38	14.0	14.6	12.2
BC 20B	Kimberley	3800	5/1	0	0.0	0.0	1.2*
BC 32	Marble Canyon	5000	4/30	22	8.2	11.2	13.4
BC 10B	Morrissey Ridge	6100				28.8	-
BC 10A	New Fernie	4100				9.3	6.0*
15A01	Red Mountain	6000	4/29	47	19.6	21.9	20.9
BC 8A	Sinclair Pass	4500	4/30	7	1.6	0.0	2.2*
BC 20A	Sullivan Mine	5100	4/29	34	13.0	11.0	12.5
BC 41	Upper Elk River	4400	4/29	0	0.0	3.0	2.5*
14A07	Weasel Divide	5450	4/28	65	29.6	38.2	35.7*

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
15B15M	Baree Trail	3800	48	7.5			6.7	-
14A10M	Murphy Lake R. S.	3000	48	22.6	5/1	21.4	23.0	-
15A02M	Raven R. S.	3050	48	23.0			22.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED I

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW	
					LAST YEAR*	AVERAGE
	FISHER RIVER					
3020	Jennings (near)	May-Sept	210	94		223
	KOOTENAI RIVER					
3030	Libby (at)	May-Sept	7520	101	7284	7428
	YAAK RIVER					
3045	Troy (near)	May-Sept	410	94	448	435
	KOOTENAI RIVER					
3050	Leonia (at)	May-Sept	8500	101	8094	8416

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

FLATHEAD RIVER BASIN

MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook for the next five months is a little below average.

Snow survey measurements made near the first of May indicate the mountain snow pack is about two-thirds of that measured a year ago, and about 20 percent below the 1948-62 average. Melt has begun in the higher elevations.

Streamflow was near to a little above average during April. Runoff for the May through September period is expected to be 10 to 20 percent below average.

Soil moisture is generally above average in low and median elevations. Valey soils are drying.

Report prepared by
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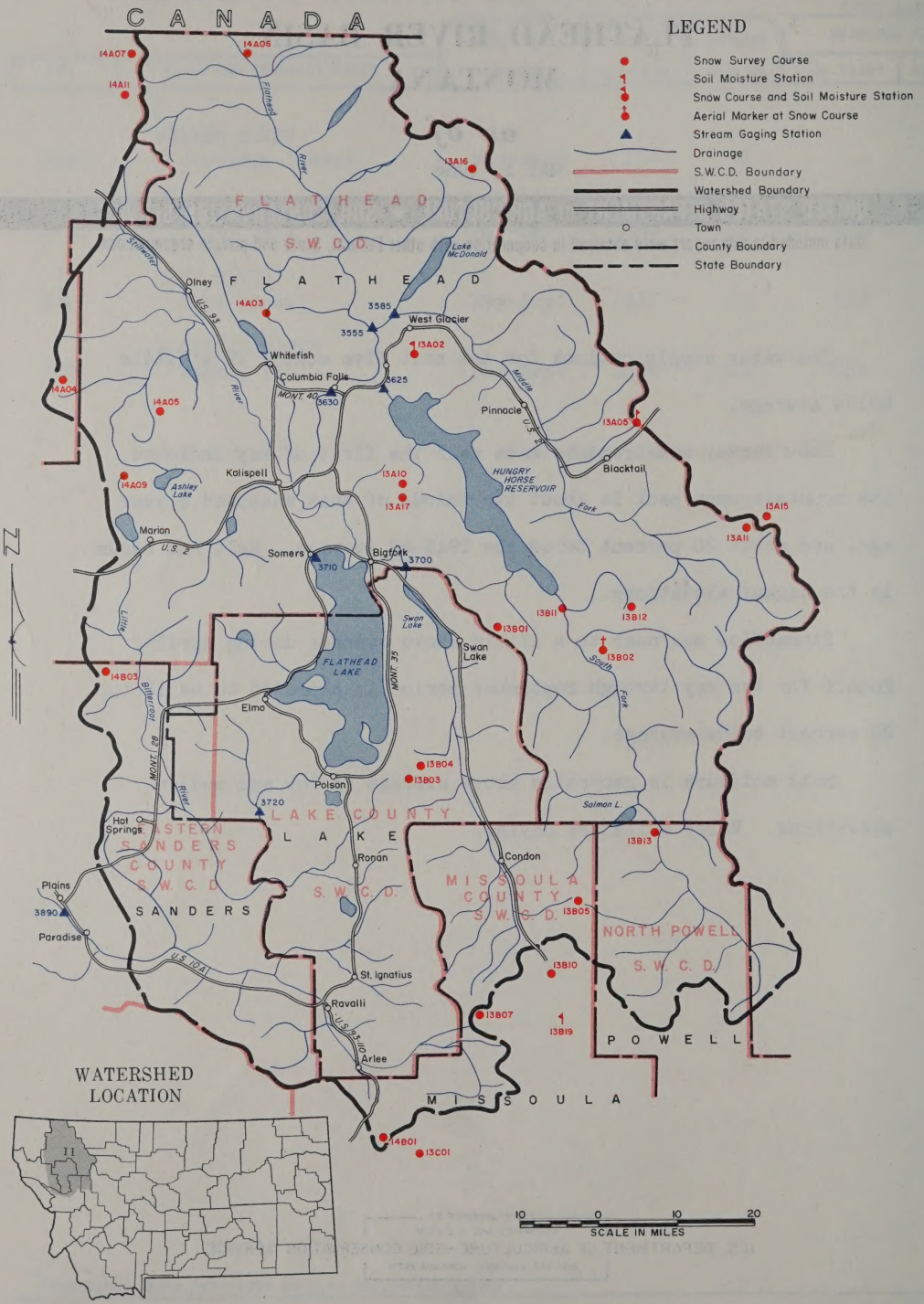
FLATHEAD LAKE RIVER BASIN



MT-2b

SNOW SURVEY DATA

WATERSHED II

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13A15	Badger Pass	6900	5/2	75	37.1	49.8	-
14B03	Bassoo Peak	5150	4/25	17	7.8	7.4	9.7*
13A11	Beaver Lake	5900	5/2	44	20.2	31.8	-
13B03	Big Creek	6750	4/27	91	39.6	59.8	50.5*
14A04	Brush Creek	5000	4/27	19	7.2	10.2	10.7*
13A17	Camp Misery	6400	4/26	93	41.0	65.8	52.0*
13B10	Coyote Hill	4200	4/28	1	0.4	5.0	2.3
13A02	Desert Mountain	5600	4/26	23	10.3	20.6	14.6
13B04	Fatty Creek	5500	4/27	45	19.0	26.1	22.5*
BC 10	Fernie	3500	4/29	1	0.3	3.2	2.8
14A11	Graves Creek	4300	4/28	31	12.8	16.9	-
14A09	Griffin Creek Divide	5150	4/26	10	3.8	7.5	9.8*
13B12	Gunsight Lake	6300	4/29	85	41.6	50.8	-
14A03	Hell Roaring Divide	5770	4/28	58	29.4	37.5	31.5
13B13	Holbrook	4530	4/29	0	0.0	0.0	1.4*
14A05	Logan Creek	4300	4/27	0	0.0	1.6	3.4*
13A05	Marias Pass	5250	4/26	31	14.0	28.0	18.0
13A16	Mineral Creek	4000	4/30	25	9.0	17.5	-
BC 10B	Morrissey Ridge	6100				28.8	-
BC 10A	New Fernie	4100				9.3	6.0*
13B07	North Fork Jocko	6330	4/28	79	36.2	55.0	48.0*
13B02	Spotted Bear Mountain	7000	4/29	19	9.2	14.6	12.4*
13C01	Stuart Mountain	7400	4/30	65	28.6	38.4	30.4*
13B01	Trinkus Lake	6100	4/29	84	41.4	54.4	45.4*
14B01	TV Mountain	6800	5/1	41	17.6	23.2	20.3*
13B11	Twin Creeks	3580	4/29	0	0.0	0.0	1.4*
13B05	Upper Holland Lake	7000	4/29	71	34.8	45.5	39.0*
14A07	Weasel Divide	5450	4/28	65	29.6	38.2	35.7*

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
13A02M	Desert Mountain	5600	54	8.4	4/26	9.6	9.6	8.3
13A05M	Marias Pass	5250	54	6.5			6.4	6.0
13B19M	Seeley Lake	4030	48	11.9	5/2	11.6	12.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED II

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	May-Sept	1650	90	2017	1833
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	May-Sept	1510	87	1933	1736
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (near)(7)	May-Sept	1840	87	2456	2103
	FLATHEAD RIVER					
3630	Columbia Falls (at)(7)	May-Sept	5100	87	6586	5820
	SWAN RIVER					
3700	Big Fork (near)	May-Sept	480	80	708	599
	FLATHEAD RIVER					
3720	Polson (near)(8)	May-Sept	6000	87	8067	6914

(7) Adjusted for storage in Hungry Horse Reservoir.
(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3620	Hungry Horse	3,428.0	2437.0	1564.0	2097.0
3710	Flathead Lake	1,791.0	818.5	1132.0	968.0
3756	Camas (4)	45.2	35.4	29.7	38.1
3801	Mission Valley (8)	100.3	71.8	51.0	45.1

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
LOWER CLARK FORK RIVER BASIN
MONTANA
as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook is for below average streamflow during the next five months.

Snow surveys made near May 1 indicate the mountain snow pack is about 70 percent of that measured a year ago, and about 20 percent less than the 1948-62 average. Melt has begun in the higher elevations. In the headwaters of the Clark Fork and Bitterroot the snow pack is about two-thirds average.

Streamflow from drainages above the Flathead are forecast about 75 percent average, while the Flathead should produce about 85 percent average runoff.

Tributaries to the lower reaches of the Clark Fork are forecast to produce 70 to 80 percent streamflow.

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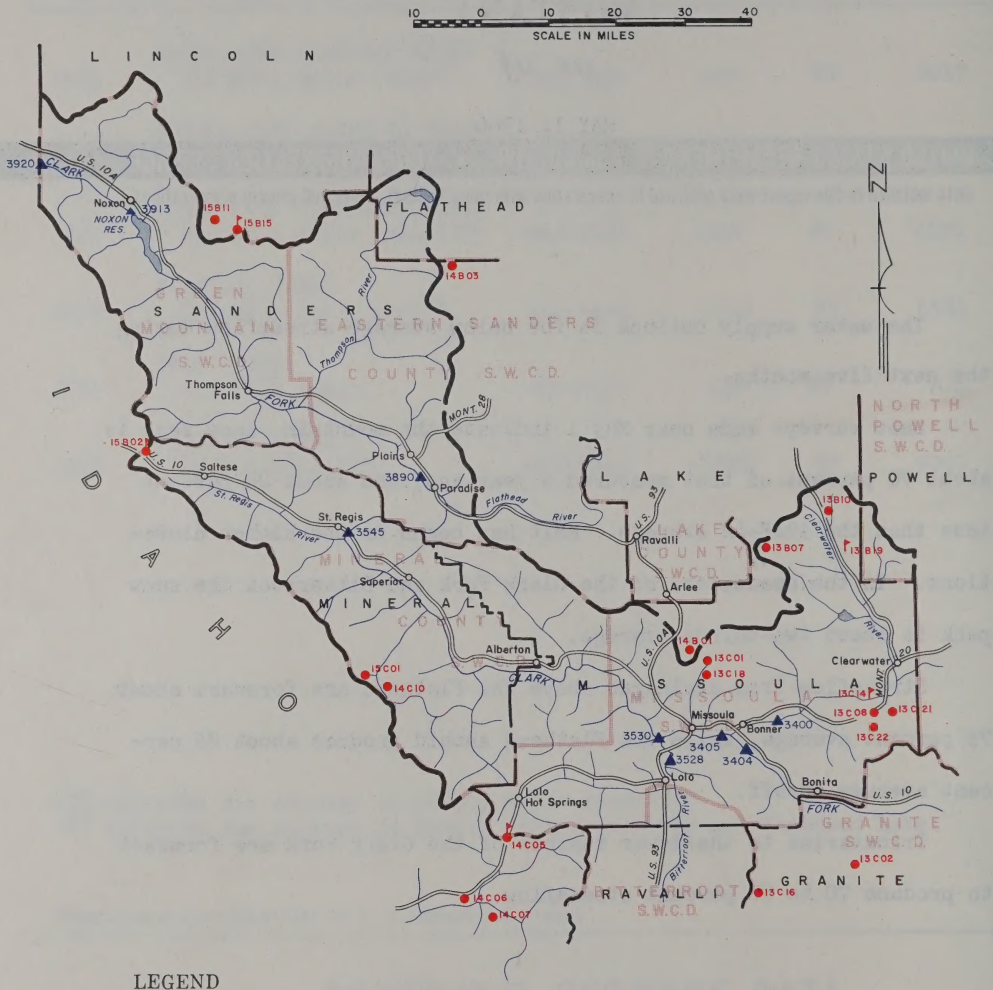
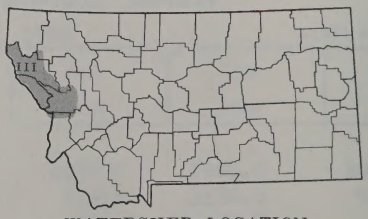
LOWER CLARK FORK RIVER BASIN



LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED III

AS OF MAY 1, 1966

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
13C16	Ambrose	6480	4/26	21	8.0	15.4	11.0*
15B11	Baree Creek	5500	5/2	77	39.4	46.2	49.1
15B16	Baree Midway	4600	5/2	52	24.8	-	-
15B15	Baree Trail	3800	5/2	0	0.0	0.0	-
14B03	Bassoo Peak	5150	4/25	17	7.8	7.4	9.7*
13B10	Coyote Hill	4200	4/28	1	0.4	5.0	2.3
14C10	Heart Lake Trail	4800	4/26	35	14.0	16.6	-
15C01	Hoodoo Creek	5900	4/26	88	41.2	56.6	50.2*
14C05	Lolo Pass	5230	4/27	44	20.3	34.8	31.8*
15B02	Lookout	5250	4/29	66	30.0	36.6	36.4
13C21	Lubrecht Forest No. 3	5450				3.4	3.6*
13C22	Lubrecht Forest No. 4	4650				0.0	0.6*
13C08	Lubrecht Forest No. 6	4040				0.0	0.1*
13B07	North Fork Jocko	6330	4/28	79	36.2	55.0	48.0*
14C04	Savage Pass	6600	4/26	49	21.2	-	-
13C02	Slide Rock Mountain	7100	4/26	33	12.8	22.3	14.7*
13C18	Spring Gulch	6000	4/30	0	0.0	3.0	3.1*
13C01	Stuart Mountain	7400	4/30	65	28.6	38.4	30.4*
14B01	TV Mountain	6800	5/1	41	17.6	23.2	20.3*

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
15B15M	Baree Trail	3800	48	7.5			6.7	-
14C05M	Lolo Pass	5250	48	10.6	4/29	7.4	9.4	-
13B19M	Seeley Lake	4030	48	11.9	5/2	11.6	12.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
3400	BLACKFOOT RIVER Bonner (near)	May-Sept	730	80	1181	914
3404	CLARK FORK RIVER Milltown (above)(4)	May-Sept	450	65	969	686
3405	CLARK FORK RIVER Missoula (above)	May-Sept	1180	73	2150	1600
3528	BITTERROOT RIVER Missoula (at)(6)	May-Sept	980	71	1724	1384
3530	CLARK FORK RIVER Missoula (below)	May-Sept	2160	72	3874	2984
3545	CLARK FORK RIVER St. Regis (at)	May-Sept	3000	74	5104	4036
3890	CLARK FORK RIVER Plains (near)(8)	May-Sept	9200	82	13546	11286
3895	THOMPSON RIVER Thompson Falls (nr)	May-Sept	200	80	242	249
3907	PROSPECT CREEK Thompson Falls (at)	May-Sept	95.0	75	113	127
3920	CLARK FORK RIVER Whitehorse Rapids (at)(9)	May-Sept	10350	82	14845	12580

(4) Difference in observed flow, Clark Fork above Missoula & Blackfoot near Bonner.
(6) Difference in observed flow, Clark Fork above and below Missoula.
(8) Adjusted for storage in Flathead Lake and Hungry Horse Reservoir.
(9) Adjusted for storage in Flathead Lake, Hungry Horse and Noxon Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3913	Noxon Rapids	334.6		170.1	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
UPPER CLARK FORK RIVER BASIN
MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook on tributaries not having reservoir storage remains poor. Streamflow during the next five months is forecast near the low that occurred in 1961. Late season streamflow will be below average.

The mountain snow pack is presently about one-half that which was measured a year ago, and about 30 percent below the 1948-62 average. The high elevation snow has begun to melt and streams will soon begin to rise.

Streamflow is forecast near the lows that occurred in 1960 and 1961 on the Clark Fork tributaries above the Blackfoot. The Blackfoot is expected to flow a little higher than in 1960 and 1961.

Shortages of late season irrigation water can be expected on the tributaries not having reservoir storage. If the below average precipitation trend continues, shortages may become critical.

Report prepared by
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UPPER CLARK FORK RIVER BASIN

SNOW SURVEY DATA

WATERSHED IV

AS OF MAY 1, 1966

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
13C16	Ambrose	6480	4/26	21	8.0	15.4	11.0*
13C13	Black Pine	7100	4/27	33	10.8	20.2	11.8*
13C13	Black Pine Pillow	7100	4/27	SP	11.8	-	-
12C05	Chessman Reservoir	6200	4/27	9	0.6	2.2	2.9
12B10	Copper Creek	5700	4/25	11	4.8	15.6	-
12C09	Copper Mountain	7700	5/2	18	5.9	-	-
12B11	Cotter Mine	6250	4/25	28	11.8	22.8	-
13C11	Fred Burr Pass	8000	4/28	59	20.9	41.3	32.5*
13C04	Intergaard	6450	5/2	6	2.0	8.4	-
13C21	Lubrecht Forest No. 3	5450				3.4	3.6*
13C22	Lubrecht Forest No. 4	4650				0.0	0.6*
13C08	Lubrecht Forest No. 6	4040				0.0	0.1*
12D01	Pipestone Pass	7200	4/26	9	1.9	4.9	4.4*
13C12	Red Lion	7100	4/28	35	11.6	26.2	19.6*
13C03	Skalkaho Summit	7260	4/27	52	19.5	38.4	26.7*
13C02	Slide Rock Mountain	7100	4/26	33	12.8	22.3	14.7*
12C01	Stemple Pass	6600	4/27	25	7.5	14.2	9.8
13C07	Storm Lake	7780	4/28	36	11.2	20.8	17.0*
12C02	Ten Mile Lower	6600	4/27	8	1.8	6.8	4.1
12C03	Ten Mile Middle	6800	4/26	26	7.7	15.0	9.9
12C04	Ten Mile Upper	8000	4/26	32	10.1	21.0	14.2

SP - Snow Pillow Observation - Water Content only.

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
13C13M	Black Pine	7100	48	10.0	4/27	5.5	-	-
13C15M	Georgetown Lake	6450	48	9.0	4/28	7.2	5.1	5.5
13C03M	Skalkaho Summit	7260	48	10.8	4/27	10.4	9.7	-
12C08M	Stemple Pass	6350	48	5.9	4/29	5.4	5.4	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED IV

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	FLINT CREEK					
3301	Boulder Creek (below)(3)	May-Sept	46.0	72	95.8	64.1
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg	May-Sept	54.0	73		73.6
	BLACKFOOT RIVER					
3400	Bonner (near)	May-Sept	730	80	1181	914
	CLARK FORK RIVER					
3404	Milltown (above)(4)	May-Sept	450	65	969	686

(3) Sum, Flint Creek at Maxville and Boulder Creek at Maxville.
(4) Difference in observed flow, Clark Fork above Missoula and Blackfoot near Bonner

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3250	Georgetown Lake	31.0	21.6	22.0	21.2

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

BITTERROOT RIVER BASIN

MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook is poor. Streamflow during the next five months is forecast near the low that occurred in 1961. Late season streamflow will be below average and shortages of late season irrigation water can be expected on tributaries not having reservoir storage.

The mountain snow pack is presently about one-half that which was measured a year ago, and about two-thirds of the 1948-62 average. Melt has begun in the higher elevations and streamflow will soon begin to increase.

If the present trend of below average precipitation continues, late season shortages of irrigation water are likely to become critical.

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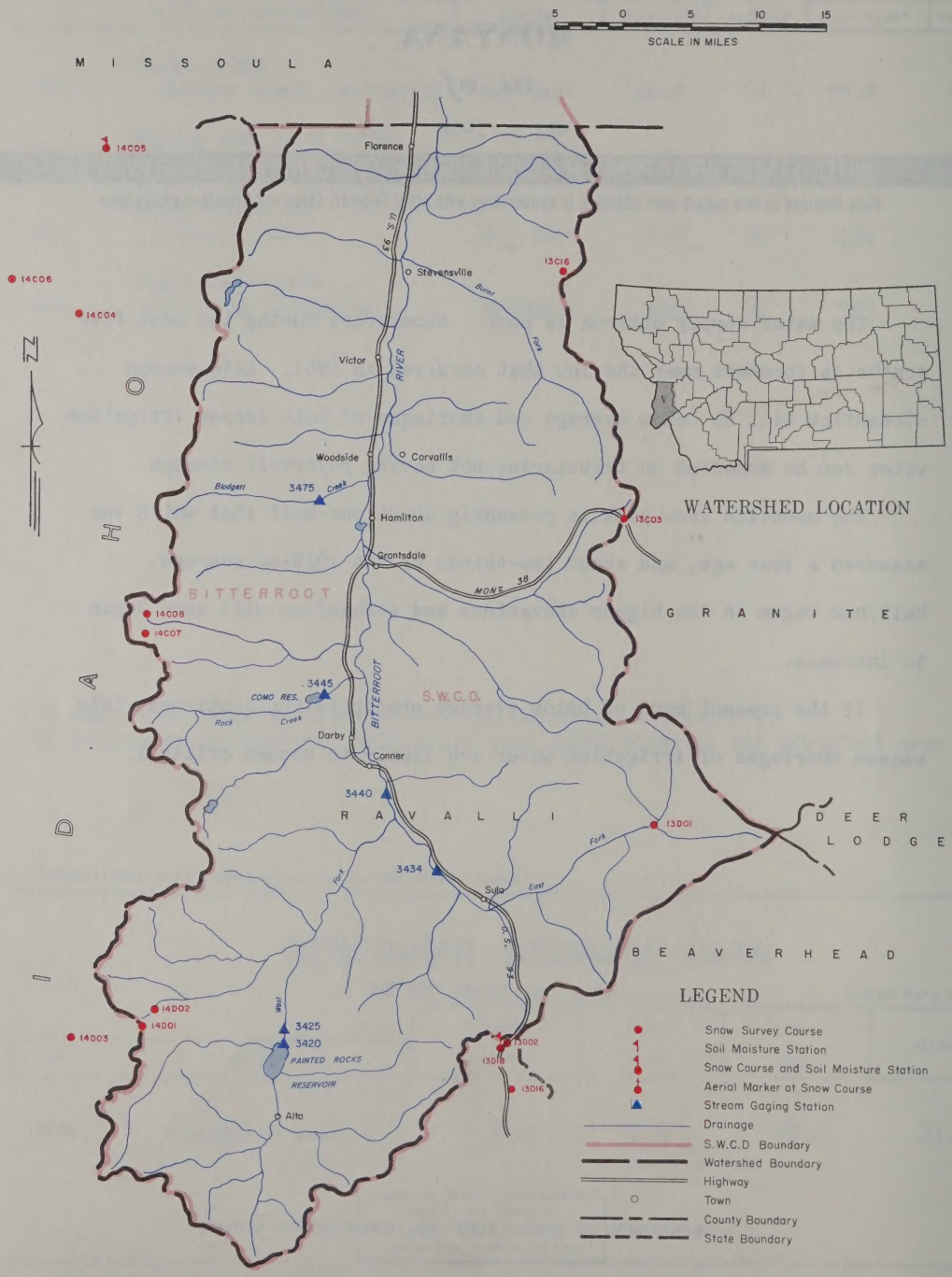
BOX 855, BOZEMAN, MONTANA 59715

BITTERROOT RIVER BASIN



SNOW SURVEY DATA

WATERSHED V

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13C16	Ambrose	6480	4/26	21	8.0	15.4	11.0*
13D02	Gibbons Pass	7100	4/28	30	12.8	29.2	23.1
14C05	Lolo Pass	5230	4/27	44	20.3	34.8	31.8*
14C07	Lost Horse	5940	4/29	47	19.0	37.3	34.1*
14D02	Nez Perce Camp	5680	4/27	17	4.2	15.7	9.7
14D01	Nez Perce Pass	6570	4/27	24	6.0	19.8	13.3
13D22	Saddle Mountain	7940	4/28	47	18.4	33.3	-
14C04	Savage Pass	6600	4/26	49	21.2	-	-
13C03	Skalkaho Summit	7260	4/27	52	19.5	38.4	26.7*
14C08	Twin Lakes	6510	4/29	68	29.4	52.2	46.6*

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
13D18M	Gibbons Pass	7100	48	7.1	4/28	6.2	7.2	6.8
14C05M	Lolo Pass	5250	48	10.6	4/29	7.4	9.4	-
13C03M	Skalkaho Summit	7260	48	10.8	4/27	10.4	9.7	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERHSED V

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(5)	May-Sept	121	77	195	157
	BITTERROOT RIVER					
3440	Darby (near)	May-Sept	385	74	647	518
	BLODGETT CREEK					
3475	Corvallis (near)	May-Sept	32.5	81		39.9
	BITTERROOT RIVER					
3528	Missoula (at)(6)	May-Sept	980	71	1724	1384

(5) Adjusted for storage in Painted Rocks Reservoir.
(6) Difference in observed flow, Clark Fork above and below Missoula.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
3420	Painted Rocks	31.7	20.5	-	22.0
3445	Como	34.9		24.5	17.9

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
MARIAS, TETON and SUN RIVER BASINS
MONTANA
as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook remains fair to good.

Reservoir storage is above average and late season streamflow is expected to be near average.

The mountain snow pack is about 15 percent less than that measured a year ago and about 95 percent average. Melt is beginning in the higher elevations and streamflow will soon begin to increase.

Streamflow for the next five months is expected to be about 15 percent below the 1948-62 average on the tributary streams and 25 percent below average in the Missouri River.

Report prepared by
P.E. FARNES AND S.E. COOK
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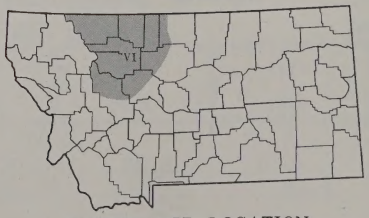
MARIAS, TETON and SUN RIVER BASINS

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED VI

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13A15	Badger Pass	6900	5/2	75	37.1	49.8	-
13A11	Beaver Lake	5900	5/2	44	20.2	31.8	-
12B06	Cabin Creek	5200	5/2	0	0.0	0.0	-
12B09	Five-Bull	5700	4/29	4	0.5	9.0	-
12A01	Freight Creek	6000	4/28	33	11.8	23.6	-
12B07	Goat Mountain	7000	4/30	29	9.2	15.9	10.3*
13A18	Hudson Bay Divide	5800	5/2	41	17.5	22.9	-
13A03	Iceberg Lake No. 3	5600	5/4	52	28.3	34.8	29.6
13A14	Josephine Lower No. 9	4900	5/3	40	18.9	19.6	17.9*
13A05	Marias Pass	5250	4/26	31	14.0	28.0	18.0
13A16	Mineral Creek	4000	4/30	25	9.0	17.5	-
13A07	Mount Allen No. 7	5700	5/3	97	47.9	45.6	49.2
13A06	Piegan Pass No. 6	5500	5/3	80	42.6	43.3	41.3
13A08	Ptarmigan No. 8	5800	5/4	70	36.1	46.8	40.3
12B01	West Fork	6000	4/28	21	7.4	23.2	-
12B04	Wrong Creek	5700	5/2	17	9.1	14.1	-
12B03	Wrong Ridge	6800	5/2	37	18.3	30.9	-

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
13A05M	Marias Pass	5250	54	6.5			6.4	6.0

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED VI

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	SUN RIVER					
0786	Gibson Dam (at)(18)	May-Sept	505	88	676	573
	MISSOURI RIVER					
0908	Fort Benton (at)(17)	May-Sept	2100	73	4717	2861
	TWO MEDICINE CREEK					
0920	Browning (near)(19)	May-Sept	205	85		241
	BADGER CREEK					
0925	Browning (near)	May-Sept	113	86		132
	CUT BANK CREEK					
0990	Cut Bank (at)	May-Sept	90.0	74	124	121
	MARIAS RIVER					
0995	Shelby (near)(20)	May-Sept	480	85	629	564

(17) Adjusted for storage in Canyon Ferry Reservoir.
(18) Adjusted for storage in Gibson Reservoir and diversions.
(19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Ca
(20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoir

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0795	Gibson	105.0	74.5	58.8	65.7
0805	Pishkun	32.0	24.7	16.8	22.5
0820	Willow Creek	32.3	26.6	19.5	23.4
0930	Four Horns	20.0		13.4	10.9
0940	Swift	30.0	-	-	26.7
0955	Lake Frances	112.0	98.9	-	96.0
1013	Tiber	1347.0	707.9	836.6	656.3

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
MISSOURI RIVER (MAIN STEM) BASIN
MONTANA
as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook improved slightly during April. Late season streamflow is expected to be near average from streams east of the Missouri but below average for those on the west.

The mountain snow pack is presently about 60 percent of that measured a year ago. Snow cover west of the Missouri is about 70 percent average and near average on the east side.

Streamflow during the next five months is forecast 10 to 20 percent below average on tributary streams and about 25 percent below average on the Missouri River.

Report prepared by
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MISSOURI RIVER (MAIN STEM) BASIN

SNOW SURVEY DATA

WATERSHED VII

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
11C01	Boulder Mountain	7950	4/26	57	18.0	23.4	16.1*
12C05	Chessman Reservoir	6200	4/27	9	0.6	2.2	2.9
10C09	Deadman Creek	6450	4/28	16	5.6	-	-
10C07	Elk Peak	8000	4/27	51	17.2	26.8	16.5*
10C02	Grasshopper	7000	4/27	12	4.2	7.4	-
10C01	Kings Hill	7500	4/28	42	12.4	18.4	13.8
10C06	Spur Park	8000	4/28	60	20.4	29.7	20.0*
12C01	Stemple Pass	6600	4/27	25	7.5	14.2	9.8
12C02	Ten Mile Lower	6600	4/27	8	1.8	6.8	4.1
12C03	Ten Mile Middle	6800	4/26	26	7.7	15.0	9.9
12C04	Ten Mile Upper	8000	4/26	32	10.1	21.0	14.2

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
10C01M	Kings Hill	7420	48	11.8	4/28	8.8	7.8	-
12C08M	Stemple Pass	6350	48	5.9	4/29	5.4	5.4	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED VII

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(16)	May-Sept	1350	74	3015	1816
	PRICKLY PEAR CREEK					
0615	Clancy (near)	May-Sept	15.6	82	32.3	19.0
	SHEEP CREEK					
0770	White Sulphur Springs (nr)	May-Sept	13.0	84	31.0	15.4
	SUN RIVER					
0786	Gibson Dam (at)(18)	May-Sept	505	88	676	573

(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.
(17) Adjusted for storage in Canyon Ferry Reservoir.
(18) Adjusted for storage in Gibson Reservoir and diversions.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0585	Canyon Ferry	2043.0	1478.0	1589.0	1577.4
0645	Lake Helena	10.4	10.7	9.2	6.6
0650	Hauser Lk. + Lk. Helena	61.9	62.4	58.4	49.9
0660	Holter Lake	81.9	78.1	69.0	61.8
0750	Smith River	10.7	10.8	11.4	8.1

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
JEFFERSON RIVER and TRIBUTARY BASINS
MONTANA
as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook varies from good in the southern portion of the drainage to fair in the Ruby and Big Hole-Boulder drainages. Late season streamflow will be below average on all tributaries.

The high elevation snow pack showed a good increase during April in the head of the Red Rock and southeastern corner of the Ruby, with only small changes in other portions of the Jefferson drainage. The snow pack is about 45 percent of that measured a year ago.

The Red Rock has about 90 percent average snow pack, while the Big Hole-Boulder areas show about 65 percent average.

Streamflow during the next five months is expected to be about 10 percent below average on the Red Rock, and 20 percent below average on other tributaries to the Jefferson.

Some late season shortages can be expected on streams not having reservoir storage.

Report prepared by
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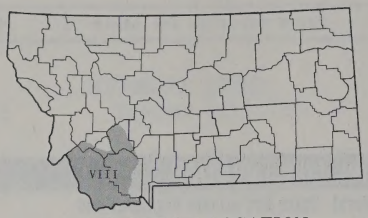
JEFFERSON RIVER and TRIBUTARY BASINS



WATERSHED LOCATION

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

15 0 15 30
SCALE IN MILES

SNOW SURVEY DATA

WATERSHED VIII

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
13D20	Abundance Lake	8800	5/2	38	14.8	32.2	-
12C07	Berry Meadow	7300	4/28	17	5.1	9.1	6.7*
13D10	Bloody Dick	7600	4/25	13	4.6	15.2	-
11D07	Call Road	8050	5/2	32	11.1	15.9	-
13C05	Chessman Reservoir	6200	4/27	9	0.6	2.2	2.9
11D08	Clover Meadow	8600	5/2	45	17.0	24.0	-
12C09	Copper Mountain	7700	5/2	18	5.9	-	-
13E22	Dad Creek Lake	8400	5/2	35	12.0	23.2	-
13D19	Darkhorse Lake	8600	5/2	47	19.2	41.0	-
12E07	Divide	7900	5/2	18	6.4	14.7	-
13D15	Elk Horn Springs	7800	4/28	16	4.9	15.1	8.4*
13D21	Foolhen	8280	5/2	30	11.7	27.3	-
11D12	Four Mile	6900	4/27	16	4.3	10.6	-
13D02	Gibbons Pass	7100	4/28	30	12.8	29.2	23.1
13D09	Gold Stone	8100	4/25	28	9.9	22.7	-
13D08	Jahnke Creek	7340	4/25	6	1.8	10.0	-
11E04	Lakeview Canyon	6930	4/27	26	9.7	19.2	9.5*
11E03	Lakeview Ridge	7400	4/27	21	7.6	16.7	7.3*
11D11	Lower Twin	7900	4/27	56	19.4	31.2	-
12E06	Notch	8500	5/2	43	16.6	21.2	-
12D01	Pipestone Pass	7200	4/26	9	1.9	4.9	4.4*
13D22	Saddle Mountain	7940	4/28	47	18.4	33.3	-
13C07	Storm Lake	7780	4/28	36	11.2	20.8	17.0*
12C02	Ten Mile Lower	6600	4/27	8	1.8	6.8	4.1
12C03	Ten Mile Middle	6800	4/26	26	7.7	15.0	9.9
12C04	Ten Mile Upper	8000	4/26	32	10.1	21.0	14.2
11E27	Upper West Fork	8750	5/2	30	11.6	-	-
12E01	White Pine Ridge	8850	5/2	0	0.0	7.9	-

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
13D18M	Gibbons Pass	7100	48	7.1	4/28	6.2	7.2	6.8
11E13M	Lakeview	6700	48	15.3	5/2	9.8	16.5	15.3

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED VIII

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW	
					LAST YEAR*	AVERAGE
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	May-Sept	45.8	92	73.8	49.8
	RED ROCK RIVER					
0125	Monida (near)(11)	May-Sept	49.0	89	97.8	54.9
	BIG HOLE RIVER					
0255	Melrose (near)	May-Sept	500	80	1046	625
	BOULDER RIVER					
0330	Boulder (near)	May-Sept	53.3	80	127	66.4
	JEFFERSON RIVER					
0345	Sappington (at)(12)	May-Sept	632	77	1516	824

(11) Adjusted for storage in Lima Reservoir.
(12) Adjusted for storage in Clark Canyon Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0120	Lima	84.0	61.8	77.3	48.3
0153	Clark Canyon	328.9	158.1	108.4	-
0205	Ruby	38.8	36.9	-	31.7

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK

MADISON and GALLATIN RIVER BASINS

MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook has improved during April with above average mountain precipitation. However, late season streamflow is still expected to be below average.

Snow surveys made near the first of May indicate the present mountain snow pack is 50 to 60 percent that which was measured a year ago.

The Gallatin drainage snow pack is about 85 percent of the 1948-62 average. Most high elevation courses in the Madison drainage do not have sufficient length of record to determine an average but it is estimated that the snow pack is about 75 to 80 percent average with about 90 percent average snow pack in the drainage above Hebgen Lake.

Most high elevation courses in the Madison and Gallatin drainages showed 3 to 6 inches increase in water content during April. Snow is melting at the higher elevations and streamflow will soon begin to increase.

Runoff for the next five months is forecast to be about 90 percent average in the headwaters of the Madison and some Gallatin tributaries.

Streamflow on lower tributaries to the Madison and some drainages in the Gallatin will be 70 to 80 percent average.

Late season shortages of irrigation water can be expected on tributaries to the Madison and Gallatin that do not have reservoir storage.

Report prepared by
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MADISON and GALLATIN RIVER BASINS

SNOW SURVEY DATA

WATERSHED IX

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
10D14	Arch Falls	7350	4/30	34	11.6	16.8	12.0*
11D09	Bear Basin	8150	4/28	47	17.2	27.9	22.6*
11E09	Big Springs	6500	4/29	21	9.2	21.0	-
10D15	Bridger Bowl Pillow	7250	4/30	SP	24.8	34.0	-
11D07	Call Road	8050	5/2	32	11.1	15.9	-
10E03	Canyon	7750	4/29	38	12.8	24.7	13.5*
11D08	Clover Meadow	8600	5/2	45	17.0	24.0	-
10D04	Devil's Slide	8100	4/30	63	22.2	32.0	24.9
11D12	Four Mile	6900	4/27	16	4.3	10.6	-
11E25	Freezeout Lake	7200	5/3	2	0.8	5.2	-
11E26	Freezeout Mountain	8250	5/3	31	12.2	24.4	-
11E05	Hebgen Dam	6550	4/29	3	1.0	10.8	4.8
10D03	Hood Meadow	6600	4/30	14	5.2	10.0	6.6
11E10	Island Park	6315	4/29	9	2.9	11.9	-
11D05	Jack Creek	7500	4/26	3	0.4	-	-
11E22	Lake Creek	6100	5/3	0	0.0	1.3	-
10D13	Lick Creek Pillow	6860	4/27	SP	6.8	-	-
11D10	Little Park	7400	4/28	38	13.0	19.9	16.0*
11D11	Lower Twin	7900	4/27	56	19.4	31.2	-
11E23	Meridian Creek	7000	5/3	12	3.7	10.0	-
10E22	Norris Basin	7500	5/3	0	0.0	10.1	5.5*
11D03	North Meadow	7500	4/27	30	8.4	-	-
11E21	Potomageton Park	7150	4/27	14	4.9	17.4	-
10D10	Sacajawea	6550	4/30	29	11.4	17.2	10.8*
11E20	Sentinel Creek	8300	4/27	52	18.3	37.2	-
10D16	Shower Falls Pillow	8100	4/30	SP	25.4	-	-
11E24	Tepee Creek	8000	5/3	37	11.5	21.2	-
11E06	Twenty-One Mile	7150	4/30	33	12.8	24.8	14.9
11E27	Upper West Fork	8750	5/2	30	11.6	-	-
11E08	Valley View	6500	4/29	20	7.8	18.6	-
11E07	West Yellowstone	6700	4/30	4	1.4	11.5	5.6

SP - Snow Pillow Observation - Water Content only.

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
NO.	NAME	ELEVATION						
10D11M	Battle Ridge	6020	48	17.6	4/29	15.2	16.6	15.4
10D15M	Bridger Bowl	7250	48	15.8	4/30	16.4	-	-
11D02M	College Site	4856	54	14.5	4/29	14.8	13.2	12.3
10D13M	Lick Creek	6860	48	18.8	4/30	19.0	-	-
10D04M	Red Bluff	4800	40	4.7	5/1	2.3	2.6	2.6
11E06M	Twenty-One Mile	7150	48	10.0	4/28	3.4	3.6	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED IX

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
0375	MADISON RIVER West Yellowstone (near)	May-Sept	169	94	239	179
0385	MADISON RIVER Grayling (near)(13)	May-Sept	335	92	520	364
0410	MADISON RIVER McAllister (near)(14)	May-Sept	544	87	914	623
0435	GALLATIN RIVER Gateway (near)	May-Sept	340	81	620	418
0485	BRIDGER CREEK Bozeman (near)	May-Sept	14.5	88	25.2	16.5
0500	HYALITE CREEK Bozeman (near)(15)	May-Sept	30.0	92	50.9	32.6
0525	GALLATIN RIVER Logan (at)	May-Sept	285	71	672	400
0545	MISSOURI RIVER Toston (at)(16)	May-Sept	1350	74	3015	1816

(13) Adjusted for storage in Hebgen Lake.
(14) Adjusted for storage in Hebgen and Ennis Lakes.
(15) Adjusted for storage in Middle Creek Reservoir.
(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
0380	Hebgen Lake	377.5	266.8	198.8	174.8
0405	Ennis Lake	41.0	39.0	25.0	34.9
0495	Middle Creek	8.0	3.3	4.1	4.6

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY OUTLOOK
JUDITH and MUSSELSHELL RIVER BASINS
MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook remains fair to good. Late season streamflow is expected to be a little below average.

Snow surveys made near the first of May indicate near average mountain snow pack. High elevation snow courses showed 3 to 5 inches increase in water content during April. High elevation snow is beginning to melt and streamflow will soon begin to increase.

Streamflow for the next five months is forecast to be 75 to 85 percent average.

Reservoir storage is above average. Some late season shortages can be expected on streams not having reservoir storage.

Report prepared by
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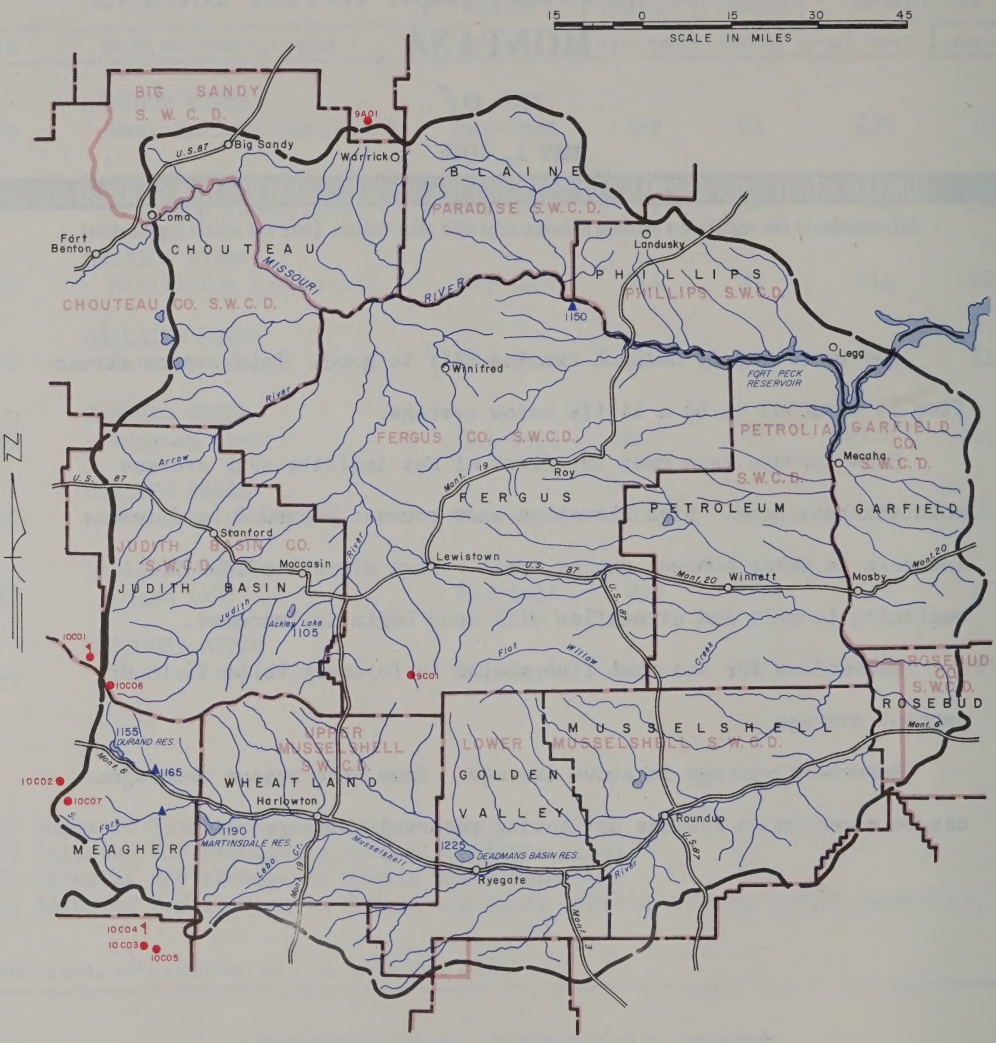
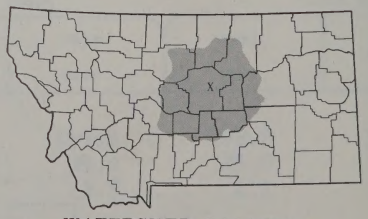
JUDITH and MUSSELSHELL RIVER BASINS



LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary



WATERSHED LOCATION

SNOW SURVEY DATA

WATERSHED X

AS OF MAY 1, 1966

(Inches)

SNOW COURSE NO.	NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
9C02	Avalanche	7100	4/29	64	21.7	-	-
10C05	Bald Ridge	7500	4/29	28	10.0	18.0	-
9C01	Crystal Lake	6100	4/29	27	9.2	-	-
10C09	Deadman Creek	6450	4/28	16	5.6	-	-
10C07	Elk Peak	8000	4/27	51	17.2	26.8	16.5*
10C02	Grasshopper	7000	4/27	12	4.2	7.4	-
10C01	Kings Hill	7500	4/28	42	12.4	18.4	13.8
10C03	Porcupine R. S.	6500	4/29	17	5.2	11.5	-
9C03	Rock Creek	5600	4/29	15	5.1	-	-
10C08	South Fork Shields	8100	4/29	68	26.3	36.4	-
10C06	Spur Park	8000	4/28	60	20.4	29.7	20.0*

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION NO.	NAME	ELEVATION	SOIL PROFILE: DEPTH	SOIL PROFILE: FIELD CAPACITY	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SOIL MOISTURE	PAST RECORD: LAST YEAR	PAST RECORD: **AVERAGE
10C01M	Kings Hill	7420	48	11.8	4/28	8.8	7.8	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED X

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	JUDITH RIVER					
1100	Utica (near)	May-Sept	28.0	86	71.3	32.7
	MISSOURI RIVER					
1150	Zortman (near)(21)	May-Sept	2900	75	6060	3885
	N.FORK MUSSELSHELL RIVER					
1155	Delpine (near)	May-Sept	3.8	76	8.2	5.0
	S.FORK MUSSELSHELL RIVER					
1185	Martinsdale (above)	May-Sept	35.0	82	64.6	42.8

(21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
1105	Ackley Lake	5.8		-	3.6
1165	Durand	7.0	7.0	7.0	5.9
1190	Martinsdale	23.1	16.7	10.6	10.6
1225	Deadman's Basin	72.2	66.6	59.2	45.1

WATER SUPPLY OUTLOOK
UPPER YELLOWSTONE RIVER BASIN
MONTANA
as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook improved during the past month. Late season streamflow is expected to be a little below average on streams tributary to the Yellowstone.

Snow surveys made near the first of May indicate the mountain snow pack is about one-half that which was measured a year ago and about 80 percent average. High elevation courses showed 3 to 9 inches increase in water content during April. Melt has begun at the higher elevations and streams will soon begin to rise.

Streamflow for the next five months is forecast 80 to 90 percent average with lower percentages on streams originating in the Beartooth-Absaroka range. Late season shortages of irrigation water can be expected on smaller tributaries not having reservoir storage.

Report prepared by
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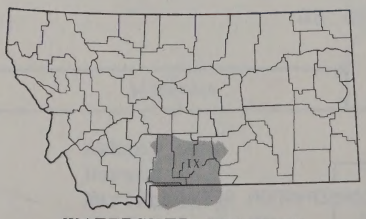
UPPER YELLOWSTONE RIVER BASIN



WATERSHED LOCATION

MT-11b

SNOW SURVEY DATA

WATERSHED XI

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
10C05	Bald Ridge	7500	4/29	28	10.0	18.0	-
10D15	Bridger Bowl Pillow	7250	4/30	SP	24.8	34.0	-
9D01	Camp Senia	7890	5/2	25	7.6	10.8	9.3*
10E03	Canyon	7750	4/29	38	12.8	24.7	13.5*
9D07	Cooke Guard Station	8150	4/29	49	15.5	-	-
10D04	Devil's Slide	8100	4/30	63	22.2	32.0	24.9
10E06	East Entrance	7000	5/3	0	0.0	2.7	3.6*
9D06	Fisher Creek	9100	4/29	95	36.5	-	-
9D05	Grizzly Peak	8400	4/29	71	21.6	23.8	18.2*
10D06	Independence	8000	4/25	33	12.9	27.0	17.7*
10E04	Lake Camp	7850	4/29	22	6.0	13.4	7.2*
9E01	Lodgepole	8200				12.1	10.7*
10E01	Lupine Creek	7300	5/2	0	0.0	8.2	7.7*
10D12	Monument Peak	9000	4/25	56	20.9	37.3	26.4*
10E02	Norris Basin	7500	5/3	0	0.0	10.1	5.5*
10D07	Northeast Entrance	7400	5/2	8	3.2	10.2	6.2
10C03	Porcupine R. S.	6500	4/29	17	5.2	11.5	-
10D10	Sacajawea	6550	4/30	29	11.4	17.2	10.8*
10D16	Shower Falls Pillow	8100	4/30	SP	25.4	-	-
10C08	South Fork Shields	8100	4/29	68	26.3	36.4	-
10E05	Sylvan Pass	7100	5/2	25	8.0	15.2	10.6*
9D04	Timberline Creek	8850	5/2	49	16.9	25.2	16.7*

SP - Snow Pillow Observation - Water Content only.

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
10D11M	Battle Ridge	6020	48	17.6	4/29	15.2	16.6	15.4
10D15M	Bridger Bowl	7250	48	15.8	4/30	16.4	-	-
10D07M	Northeast Entrance	7350	48	9.4			7.4	7.7

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED XI

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
1915	YELLOWSTONE RIVER Corwin Springs (at)	May-Sept	1700	95	2474	1792
1925	YELLOWSTONE RIVER Livingston (near)	May-Sept	1810	90	2865	2019
1935	SHIELDS RIVER Clyde Park (at)	May-Sept	74.0	90	132	82.1
2000	BOULDER RIVER Big Timber (at)	May-Sept	256	78	472	330
2050	STILLWATER RIVER Absarokee (near)(25)	May-Sept	425	80	642	531
2075	CLARKS FORK RIVER Chance (at)	May-Sept	480	86	736	560
2085	CLARKS FORK RIVER Edgar (at)	May-Sept	500	86	774	578
2095	ROCK CREEK Red Lodge (near)	May-Sept	81.0	80	138	101
2145	YELLOWSTONE RIVER Billings (at)	May-Sept	3000	82	5266	3675

(25) Adjusted for storage in Mystic Lake.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
2040	Mystic Lake	20.8	2.0	1.6	2.8
2120	Cooney	27.5	22.6	11.2	15.0

WATER SUPPLY OUTLOOK

MILK RIVER BASIN

MONTANA

as of

MAY 1, 1966

UNITED STATES DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Data included in this report were obtained in cooperation with other Federal, State and private organizations

The water supply outlook remains good. The mountain snow pack in the St. Mary drainage is near average.

The St. Mary River is forecast a little below average but will provide adequate runoff for diversion into the St. Mary canal. The combined flow of the Milk and the canal is expected to be about 90 percent average. The streamflow, combined with near capacity reservoir storage, will provide adequate irrigation water supplies.

Report prepared by
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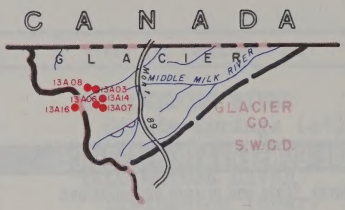
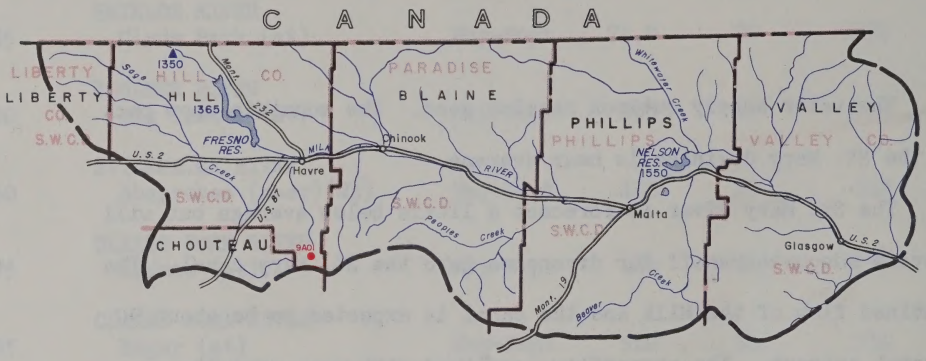
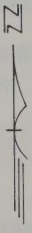
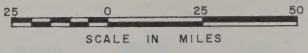
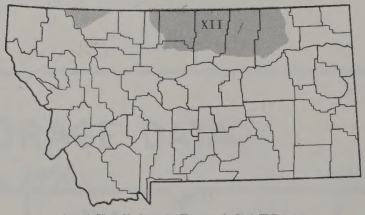
MILK RIVER BASIN











WATERSHED LOCATION

LEGEND

- Snow Survey Course
- Soil Moisture Station
- Snow Course and Soil Moisture Station
- Aerial Marker at Snow Course
- Stream Gaging Station
- Drainage
- S.W.C.D. Boundary
- Watershed Boundary
- Highway
- Town
- County Boundary
- State Boundary

SNOW SURVEY DATA

WATERSHED XII

AS OF MAY 1, 1966

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
13A18	Hudson Bay Divide	5800	5/2	41	17.5	22.9	-
13A03	Iceberg Lake No. 3	5600	5/4	52	28.3	34.8	29.6
13A14	Josephine Lower No. 9	4900	5/3	40	18.9	19.6	17.9*
13A05	Marias Pass	5250	4/26	31	14.0	28.0	18.0
13A16	Mineral Creek	4000	4/30	25	9.0	17.5	-
13A07	Mount Allen No. 7	5700	5/3	97	47.8	45.6	49.2
13A06	Piegan Pass No. 6	5500	5/3	80	42.6	43.3	41.3
13A08	Ptarmigan No. 8	5800	5/4	70	36.1	46.8	40.3

SOIL MOISTURE DATA

AS OF MAY 1, 1966

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
13A05M	Marias Pass	5250	54	6.5			6.4	6.0

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE **AVERAGE FOR PERIOD OF RECORD

WATER SUPPLY FORECASTS

WATERSHED XII

AS OF MAY 1, 1966

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW	
					LAST YEAR*	AVERAGE
	ST. MARY RIVER					
0175	Babb (near)(30)	May-Sept	435	93		468
	MILK RIVER					
1350	Eastern Crossing (at)	May-Sept	185	90	231	206

(30) Adjusted for storage in Lake Sherburne.

*PROVISIONAL DATA FURNISHED BY U. S. GEOLOGICAL SURVEY

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1966

(1000 Acre Feet)

NO.	RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE
1365	Fresno	127.2	128.1	134.9	108.1
1550	Nelson	66.8	58.9	40.3	39.8